

High Dynamic Range Stereo X (HiDyRS-X)

Completed Technology Project (2015 - 2016)



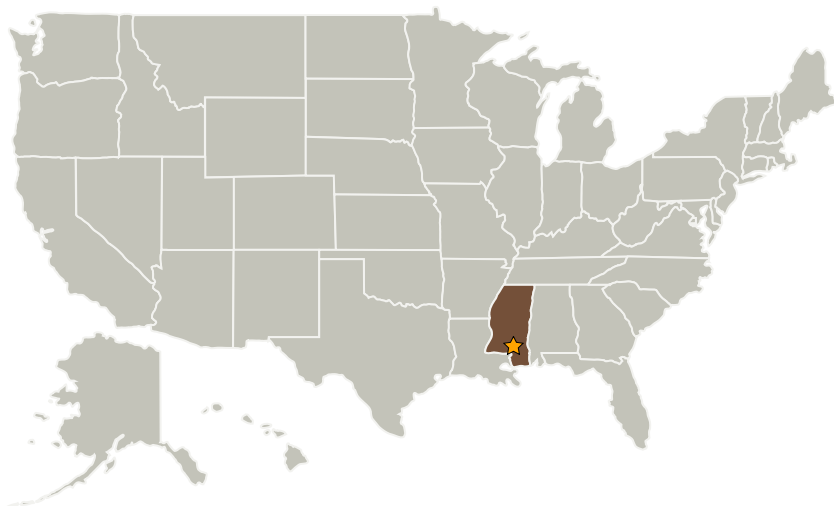
Project Introduction

At Stennis Space Center in MS, the ECI team is developing a high speed video camera that records fast-moving objects/events, which incorporates the use of high dynamic range (HDR) imaging. This combined novel imaging technique will enable one camera to create a greater dynamic range of luminosity--not previously achievable using standard digital imaging techniques. Adding HDR imaging will increase the camera's light range so that multiple light levels can be captured with high speed video, and image washout (saturation) can be effectively eliminated. This capability housed within one camera does not currently exist.

Anticipated Benefits

This combined novel imaging technique will enable one camera to create a greater dynamic range of luminosity--not previously achievable using standard digital imaging techniques.

Primary U.S. Work Locations and Key Partners



HiDyRS-X QM-2 Camera System. The exhaust plume of the solid rocket motor is brighter than that of a liquid fueled rocket engine. SSC and I2R created a four-camera system to compensate.

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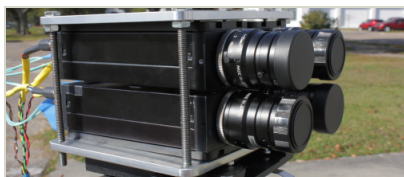


Organizations Performing Work	Role	Type	Location
★Stennis Space Center(SSC)	Lead Organization	NASA Center	Stennis Space Center, Mississippi
Innovative Imaging and Research Corporation	Supporting Organization	Industry Women-Owned Small Business (WOSB)	Stennis Space Center, Mississippi

Primary U.S. Work Locations

Mississippi

Images



Project Image

HiDyRS-X QM-2 Camera System. The exhaust plume of the solid rocket motor is brighter than that of a liquid fueled rocket engine. SSC and I2R created a four-camera system to compensate. (<https://techport.nasa.gov/image/35780>)

Project Website:

<https://www.nasa.gov/directorates/spacetech/home/index.html>

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Stennis Space Center (SSC)

Responsible Program:

Center Innovation Fund

Project Management

Program Director:

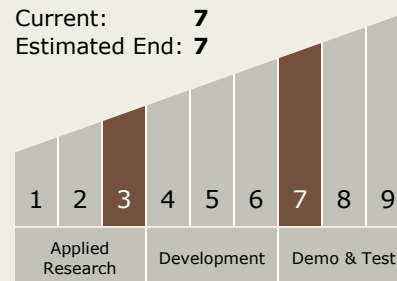
Michael R Lapointe

Project Manager:

Howard J Conyers

Technology Maturity (TRL)

Start: 3
Current: 7
Estimated End: 7



Technology Areas

Primary:

Continued on following page.

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Technology Areas (cont.)

- TX13 Ground, Test, and Surface Systems
 - └ TX13.2 Test and Qualification
 - └ TX13.2.4 Verification and Validation of Ground, Test, and Surface Systems

Target Destination

Earth